

Amendment to the Claims:

This listing of claims will replace all versions, and listings, of claims in the application:

1. (Currently Amended): A method for servicing a Virtual Local Area Network (VLAN) ~~by an access point~~, comprising:

~~storing~~ maintaining a table associating ~~[[a]]broadcast keys~~ with ~~[[a]]VLANs at an access point~~ local to the access point;

receiving a request for access to a network from a wireless station by the access point;
authenticating the wireless station with an authentication server responsive to the request by the access point;

receiving from the authentication server data identifying a VLAN for the wireless station by the access point;

accessing the table maintained at the access point ~~local to the access point~~ to determine an appropriate broadcast key for the VLAN identified by the authentication server; and

transmitting the appropriate broadcast key to the wireless station by the access point.

2. (Cancelled).

3. (Previously Presented): The method of claim 1 further comprising the step of using a separate broadcast key associated with each VLAN to encrypt the data.

4. (Cancelled).

5. (Previously Presented): The method of claim 1 wherein the wireless station operates in accordance with the IEEE 802.11 standard.

Claims 6 - 7. (Cancelled)

8. (Previously Presented): The method of claim 1 wherein the VLAN comprises a mobile IP subnet.

9. (Previously Presented): The method of claim 8 further comprising a step of tagging data to determine to which VLAN the data belongs.

10. (Currently Amended): An access point, comprising:
means for maintaining a table associating broadcast keys with Virtual Local Area Networks (VLANs) at the access point;

means for receiving a request for access to a network from a wireless station;

means for authenticating the wireless station with an authentication server;

means for receiving from the authentication server data identifying a Virtual Local Area Network (VLAN) for the wireless station;

~~means for accessing a table stored locally~~means for maintaining at the access point to
determine an appropriate broadcast key for the VLAN ~~identifier~~ identified for the wireless
station by the authentication server; and

means for transmitting the appropriate broadcast key to the wireless station.

11. (Cancelled)

12. (Previously Presented): The access point of claim 10 wherein a separate broadcast key is associated with each VLAN to encrypt data.

13. (Cancelled)

14. (Previously Presented): The access point of claim 10 wherein the wireless station operates in accordance with the IEEE 802.11 standard.

15. (Cancelled)

16. (Currently Amended): The access point of claim 10 further comprising a tag for data to determine [[]]which VLAN the data belongs.

17. (Previously Presented): The access point of claim 10 wherein the VLAN comprises a mobile IP subnet.

18. (Cancelled)

19. (Previously Presented): A method according to claim 1, further comprising:
receiving a session key from the authentication server;
sending the session key to the wireless station; and
encrypting the appropriate broadcast key with the session key for the wireless station.

20. (Previously Presented): An access point according to claim 10, further comprising:

means for receiving a session key from the authentication server;
means for sending the session key to the wireless station; and
means for encrypting the appropriate broadcast key with the session key for the wireless station.

Claims 21 – 22 (Canceled):

23. (New): A system comprising:
a first access point, the first access point configured with a first table for associating a first set of encryption keys with Virtual Local Area Networks (VLANs);
a second access point, the second access point configured with a second table for associating a second set of encryption keys with VLANs;
an authentication server communicatively coupled to the first access point and the second access point;
wherein the first access point responsive to an association request from a wireless station authenticates the wireless station with the authentication server, the first access point receiving data from the authentication server identifying a VLAN associated with the wireless station, the first access point being responsive to receiving the data identifying the VLAN associated with the wireless station to access the first table and determine a first appropriate encryption key from

the first set of encryption keys for the VLAN associated with the wireless station and the first access point is configured to communicate the first appropriate encryption key to the wireless station; and

wherein the second access point responsive to an association request from the wireless station authenticates the wireless station with the authentication server, the second access point receiving data from the authentication server identifying the VLAN associated with the wireless station, the second access point being responsive to receiving the data identifying the VLAN associated with the wireless station to access the second table and determine a second appropriate encryption key from the second set of encryption keys for the VLAN associated with the wireless station and the second access point is configured to communicate the second appropriate encryption key to the wireless station.

24. (New): A system according to claim 23, wherein the first access point is configured to dynamically assign an encryption key as the first appropriate key for the VLAN associated with the wireless station responsive to no encryption key in the first set of encryption keys being associated with the VLAN associated with the wireless station.

25. (New): A system according to claim 23, wherein the first access point receives a session key for the wireless station from the authentication server, the first access point is responsive to encrypt the first appropriate key with the session key prior to communicating the first appropriate key with the wireless station.

26. (New): A system according to claim 23, the first access point is responsive to receiving one of a group consisting of a broadcast packet and a multicast packet for the VLAN associated with the wireless station to transmit the one of the group consisting of the broadcast packet and the multicast packet encrypted with the first appropriate key.